



## SECTION THRU ELASTOMERIC BEARING

- \* W = BOTTOM FLANGE WIDTH OF PRESTRESSED GIRDERS MINUS 50 mm
- © CHECK AASHTO 14.4.1.4 REQUIREMENTS TO SEE IF THIS PLATE SHOULD BE TAPERED.

## EXPANSION BEARINGS FOR PRESTRESSED CONCRETE GIRDERS

A (mm)	EXP. LENGTH	TOTAL BEARING HEIGHT H (mm)	TOTAL ELASTOMER THICKNESS (mm)	LONGITUDINAL LENGTH OF BEARING L (MIN).	STEEL PLATE THICKNESS (mm) EACH	ELASTOMER THICKNESS T (mm)	NO.OF PLATES REQ'D.
25	42000	63	51	205	3	13	4
32	52500	79	64	255	3	13	5
38	63500	95	77	305	3	13	6
44	74000	111	90	355	3	13	7
51	85000	127	103	385	3	13	8
57	95500	143	116	435	3	13	9

- THE "EXPANSION LENGTH" IN THE TABLE WAS CALCULATED BASED ON THE TOTAL ELASTOMER THICKNESS IN COLUMN (4), IT IS FOUND BY APPLYING AASHTO (14.4.1.3), USING A TEMPERATURE RANGE OF 56° C. AND A COEFFICIENT OF THERMAL EXPANSION OF 0.0000108 mm/mm/°C. THE DESIGNER IS TO SELECT PRELIMINARY BEARING DATA FROM THE TABLE BASED ON "EXPANSION LENGTH" AND THEN COMPLETE THE DESIGN BY SATISFYING ALL CRITERIA IN AASHTO SECTION 14 (DIVISION 1). (SEE SECTION 27.7 IN "BRIDGE MANUAL" FOR DESIGN EXAMPLE.)
- ▲ L (MIN.) IS BASED ON STABILITY REQUIREMENTS (AASHTO 14.4.1.5).
- A =TOTAL HORIZONTAL MOVEMENT OF SUPERSTRUCTURE MEASURED FROM STATE AT WHICH BEARING IS UNDEFORMED.

## **NOTES**

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "LAMINATED ELASTOMERIC BEARING PADS".

ON BEARING REPLACEMENTS, COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REDUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL DIMENSIONS ARE IN MILLIMETERS.

## ELASTOMERIC BEARINGS FOR PRESTRESSED CONCRETE GIRDERS

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION
STRUCTURES DEVELOPMENT SECTION

APPROVED: 6/02